

GENERAL NOTES

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ON THE LOCATION OF SOME H. A. FREEMAN SKIPPER HOLOTYPES (HESPERIIDAE)

Additional key words: American Museum of Natural History, Mexico.

In "Records, New Species, and a new Genus of HesperIIDae from Mexico," *Journal of the Lepidopterists' Society*, Vol. 23, Supplement 2, 1969, I stated that the holotypes of most of the species described were to be placed in the United States National Museum, Washington, D.C. Actually, these holotypes were deposited in the American Museum of Natural History (AMNH), New York, in 1981 along with my entire collection of Mexican HesperIIDae. Thus, holotypes of the following species can be found in the AMNH: *Pyr-rhopyge tzotzili*, *Mysoria wilsoni*, *Epargyreus windi*, *Epargyreus brodkorbi* (designated in 1969 paper for Museum of Zoology, Univ. of Michigan), *Astraptes louiseae*, *Astraptes gilberti*, *Polythrix mexicanus*, *Aethilla chiapa*, *Mimia chiapaensis*, *Windia windi*, *Staphylus veytius*, *Staphylus zuritus*, *Quadrus francesius*, *Enosis matheri*, *Dalla ramirezi*, *Vettius argentus*, *Niconiades comitana*, *Anthoptus macalpinei*, *Cynea nigricola*, *Pher-aeus covadonga*, *Carystoides escalantei*, *Carystoides abrahami*, *Carystoides floresi*, *Carystoides mexicana*, *Atrytone mazai*, *Atrytone potosiensis*, *Mellana montezuma*, *Euphyes chamuli*, and *Tirynthia huasteca*.

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EFFECTS OF HANDLING ON *EUPHYDRYAS EDITHIA* (NYMPHALIDAE)

Additional key words: Mark-release-recapture, wing wear, aging.

A central component of most studies of insect population dynamics is mark-release-recapture (MRR). It is generally assumed that handling insects during MRR does not affect either their survival or behavior, but rarely have these assumptions been tested. Several previous studies have looked at possible effects of handling on recapture probabilities. R. H. T. Mattoni and M. S. B. Seiger (1963, *J. Res. Lepid.* 1:237-244) compared observed with expected values of multiple recaptures of *Philotes sonorensis* and found no decrease in observed recaptures, as would be expected if repeated handling had a negative effect on recapture probability. Other studies, however, found reduced probabilities of recapturing handled butterflies in the area of first capture (Singer, M. C. & P. Wedlake 1981, *Ecol. Entomol.* 6:215-216; Morton, A. C. 1982, *Oecologia* 53:105-110; Gall, L. F. 1984a, *Biol. Conserv.* 28:139-154).

Studies attempting to determine the age-structure of butterfly populations commonly use wing-wear as an indicator of age (Watt, W. B., F. S. Chew, L. R. G. Snyder, A. G. Watt & D. E. Rothschild 1977, *Oecologia* 27:1-22; Ehrlich, P. R., A. E. Launer & D. D. Murphy 1984, *Am. Nat.* 124:525-539; Gall, L. F. 1984b, *Biol. Conserv.* 28:111-138). Butterflies captured with undamaged (fresh) wings are considered young, while butterflies with worn wings are scored as old. In such studies, it is important to determine whether the MRR technique itself measurably wears the insects; such an effect would increase age estimates of repeatedly handled butterflies and possibly decrease survival. In this